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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,653	10/14/2003	Frank R. Chu	HSJ920030010US1	5655

7590 06/29/2005

Hitachi Global Storage Technologies  
5600 Cottle Road (NHGB/01  
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EXAMINER
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KAPADIA, VARSHA A

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/685,653

Applicant(s)

CHU ET AL.

Examiner

Varsha A. Kapadia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/14/05.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,11-14,18,20 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 2-4,6,8-10,15-17,19 and 21-23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/14/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/14/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **Information Disclosure**

The information disclosure statement (IDS) submitted on 10/14/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### **Rejection Under 35 U.S.C. 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,5,7,11-14,18,20 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dobbek et al (6,185,058 submitted by the applicant) in view of Hetzler et al (5,768,044).

With regards to claim 1, Dobbek et al discloses a method for writing data to a disk drive (see fig. 3 and disclosure thereof) comprising steps of: positioning a head over a selected data track having predetermined number of physical sectors (see fig.3 element 208 and disclosure thereof); writing a second predetermined of data blocks to corresponding physical sectors when the physical sector is not defective (See col.8 lines 40-58); skipping a physical sector of the selected data track when the sector is defective (see col.7 lines 39-43); and skipping a third predetermined number of physical sectors when all of the data blocks of data stream have been written to the selected track as claimed (see col.7 lines 39-43)

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Dobbek et al fails to further disclose that the step of writing uses a variable index writing technique as claimed.

Hetzler et al however discloses such (see col.6 lines 25-33 and col.10 lines 50-60) to minimize the latency before writing data.

It would have been obvious to one of ordinary skill in the art at the time this invention was made to modify the method/apparatus for writing data disclosed by Dobbek et al with the above teachings from Hetzler et al in order to provide a capability to identify the sector number passing under the head without waiting for the reference index mark and hence to minimize the latency as taught by Hetzler et al.

With regards to claims 5 and 7, Dobbek et al in view of Hetzler et al disclose the invention described above in this office action with respect to claim 1, Hetzler et al further disclose organizing the data stream into at least one data cluster, the size of the selected cluster is greater than a size of the single data track (see col.5 lines 25-45; wherein data tracks in each zones are considered as clusters). Hetzler et al is relied upon for the same reasons as stated above in this office action.

With regards to claims 11-13, Dobbek et al further discloses that a step of determining whether a physical sector is defective is based on information contained in metadata, and metadata includes information relating at least a number of physical sectors, spare sectors, physical start of the selected track, locations of defective sectors etc as claimed (See col.7 line 30 to col.8 line 14).

With regards to claims 14,18,20 and 24-26, the apparatus recited in claims 14,18,20 and 24-26 recites limitations similar to those treated in the method claims 1,5,7 and 11-13 above in

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this office action. Therefore the rejection applied to method claims 1,5,7 and 11-13 above in this office action is herein repeated for the same reasons of obviousness.

**Prior Art Cited**

Reference to Weston-Lewis et al (6,134,063) cited as of interest.

Reference to Lambert et al (2005/0086573 A1) cited as of interest.

**Allowable Subject Matter**

Claims 2-4,6,8-10,15-17,19 and 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2-4,6,8-10,15,17,19 and 21-23 differ from the prior art of record by specifically reciting method/apparatus further reciting that skipping the third predetermined number of physical sectors includes a step of writing at least one error correction information data block as a part of the second predetermined number of data blocks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Varsha A. Kapadia whose telephone number is (571)272-7557. The examiner can normally be reached on Mon Tue and Thurs. from 6:30 AM to 2:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571 272 7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VK



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